

Textbox A.2. The sample SPARQL queries used in the eCoaching for recommendation generation.

Query-1: Get all users and their associated activities:

```
SELECT ?user ?activity
WHERE {
  ?user rdf:type :User .
  ?user :hasActivity ?activity .
}
```

Query-2: Retrieve user preferences and associated sentiments:

```
SELECT ?user ?preference ?sentiment
WHERE {
  ?user rdf:type :User .
  ?user :hasPreference ?preference .
  ?user :hasSentiment ?sentiment .
}
```

Query-3: Find users with a specific diet preference:

```
SELECT ?user ?diet
WHERE {
  ?user rdf:type :User .
  ?user :hasDiet ?diet .
  FILTER (?diet = "Vegetarian")
}
```

Query-4: List all habits and their associated users:

```
SELECT ?user ?habit
WHERE {
  ?user rdf:type :User .
  ?user :hasHabit ?habit .
}
```

Query-5: Retrieve recommendations and associated sentiments:

```
SELECT ?user ?recommendation ?sentiment
WHERE {
  ?user rdf:type :User .
  ?user :hasRecommendation ?recommendation .
  ?user :hasSentiment ?sentiment .
}
```

Query-6: Find users with positive sentiment:

```
SELECT ?user
WHERE {
  ?user rdf:type :User .
  ?user :hasSentiment ?sentiment .
  FILTER (?sentiment = "positive")
}
```

Query-7: Get all users with a specific activity:

```
SELECT ?user
WHERE {
    ?user rdf:type :User .
    ?user :hasActivity :Running .
}
```

Query-8: Retrieve user feedback on recommendations:

```
SELECT ?user ?recommendation ?feedback
WHERE {
    ?user rdf:type :User .
    ?user :hasRecommendation ?recommendation .
    ?recommendation :hasFeedback ?feedback .
}
```

Query-9: List all diet preferences and their frequencies:

```
SELECT ?diet (COUNT(?user) AS ?count)
WHERE {
    ?user rdf:type :User .
    ?user :hasDiet ?diet .
}
GROUP BY ?diet
```

Query-10: Get users with specific habits and associated recommendations:

```
SELECT ?user ?habit ?recommendation
WHERE {
    ?user rdf:type :User .
    ?user :hasHabit ?habit .
    ?user :hasRecommendation ?recommendation .
}
```